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A Fiscal Year 1968 report is made on employee training in the Federal service. The first section describes purposes of training (staff utilization, improved public service, occupational flexibility, and others) and resulting benefits. Part II summarizes the extent of participation in specific agencies, sources of training (internal, interagency, and nongovernmental), types of training, participation from trades and labor, general schedule, and other pay systems, the number and proportion of men and women trained, and numbers and total annual salaries of full time and part time training personnel. Part III covers such special interest areas as planned staffing and development in personnel management (including projections of needs, the sources and duration of formal programs, and types and methods of training); describes agency programs to equip employees to work with state and local government; and describes companion volumes to this publication. Appendixes list interagency courses and subject areas, interagency programs proposed for 1969, and long-term nongovernment facilities. (ly)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

T-7
February 1969

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EMPLOYEE TRAINING IN THE FEDERAL SERVICE

FISCAL YEAR 1968
BUREAU OF TRAINING

AC004 019

EMPLOYEE TRAINING

IN THE

FEDERAL SERVICE

Fiscal Year 1968

Analysis and Evaluation Division
Bureau of Training
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February 1969

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FOREWORD

The Presidential Task Force on Career Advancement titled its epochal report on training in the Federal service "Investment for Tomorrow". The task force members, representing business, universities, foundations, and the public service, recognized in choosing a theme for their report the two universal distinguishing characteristics of training: that expenditures in the development of human resources are investments; and that these investments, like all other kinds of investments, pay their dividends in the future.

Between 1958, when the Government Employees Training Act was enacted, and April 1967, when the Bureau of Training was established in the Civil Service Commission, the training activity of Federal departments and agencies was minimally reported and analyzed. The Training Act established few reporting requirements, and although the Commission had authority to establish additional reporting requirements, it did not do so because it lacked the resources to collect and analyze the large amount of data that would be needed to document training activity in the Federal service. Thus neither the size of the total investment nor its dividends could be approximated with any degree of certainty until recently.

The present report is the Bureau's second yearly effort to describe and analyze the inputs and outputs of the Federal Government's training efforts. The information presented in our report represents significant progress toward assessing the Government's investment in the use of training as a tool in the solution of mission-related problems.

Our previous concern of not knowing the dimensions of Federal training has now been replaced with uneasiness about how much more remains to be known before we can more accurately answer the fundamental policy questions about training investments. Is the Government getting its money's worth for its investment in training? Should it invest more or less resources? Can the effectiveness of the current investment be improved significantly with new concepts and procedures?

Great progress has been made in two years in capturing the inputs about these investments. Sharper definitions and improved understanding of these definitions by the training community gained through experience allow us to report our findings more confidently. An estimate of the value of these training investments remains the great enigma, and although some progress has been made, far greater progress in measuring the utility of training needs to be made.

The payoff from some training will probably always be difficult to assess, but the odds of knowing that training objectives have been attained will have to be improved if training is to achieve its rightful place in management's eyes as it chooses among alternative investments of its scarce resources.

In the year ahead the Bureau of Training will devote its resources to improving these odds.

J. Kenneth Mulligan
Director
Bureau of Training

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INTRODUCTION

In the decade since the passage of the Government Employees Training Act, training has made many significant contributions to the more efficient and economical operation of the Federal Government. Training employees to keep them abreast of technological advances, to maintain their proficiency, to develop unavailable skills, and to improve the performance of their current duties has become an integral part of personnel management in the Federal service.

During fiscal year 1968, Federal managers sent over a million participants to internal, interagency, and non-Government programs. Although budget restrictions caused severe setbacks in the training programs of many agencies, the total Federal program grew. And where training was cut back, there is a recognition that this represents a postponement of the training, rather than a permanent curtailment.

Agency training reports for fiscal year 1968 show:

- Participation in formal classroom training programs lasting at least eight hours reached 1,034,793, a 2.6% increase over the previous year.
- The agencies spent nearly $31 million for interagency and non-Government training, a 13% decrease from 1967.
- The number of Federal employees engaged full time in training activities rose from 5,029 in 1967 to 5,605 in 1968, an increase of 11%.

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This report is based on the detailed information supplied by the agencies in their annual training reports to the Civil Service Commission for fiscal year 1968. It is in three parts.

Part I, Contributions of Training, describes the purposes for which agencies conduct training activities and the benefits resulting from this training.

Part II, Program Characteristics, describes in summary form the total training activity for fiscal year 1968 -- the extent of participation, the sources of training (internal, interagency and non-Government), the types of training provided and the number of men and women trained. (Complete statistical data have been published separately in the Statistical Annex to Employee Training in the Federal Service.) Part II also presents the numbers and total annual salaries of personnel engaged in training activities, both full time and part time.

Part III, Special Interest Areas, describes such areas as programs for planned staffing and development in personnel management, including projections of training and staffing requirements, source and duration of formal programs, and the types and methods of training provided; and agency programs to provide Federal employees with the skills and knowledges they need to work with State and local governments. It also describes the companion volumes to Employee Training in the Federal Service: Agency Training Centers for Federal Employees, Off-Campus Study Centers for Federal Employees, and Studies and Reports Relating to Training and Education.

If all Federal agencies are to benefit from these extensive and varied training activities an effective flow of training information is imperative. This report and the other publications listed above are intended to help agencies to plan and administer effective training programs.

In an effort to better determine Federal data needs, the Civil Service Commission has formed an interagency advisory committee, consisting of representatives of 22 agencies, to identify the data necessary to provide agencies with the kind of meaningful information that will assist in their management decision-making. This information is in addition to that needed to keep the President and the Congress fully informed regarding the extent to which agencies are using the provisions of the Government Employees Training Act, and the data needed by the Commission to perform its function of reviewing and coordinating the Federal training programs.

I. CONTRIBUTIONS OF TRAINING

A year ago, the Subcommittee on Manpower and Civil Service of the House Committee on Post Office and Civil Service (the Henderson Subcommittee) suggested that Federal training activities could be logically divided into five categories:

- training to improve present performance;
- training for future development;
- training for changing technology, missions, or programs;
- training to keep abreast of technological advances and to maintain proficiency in rapidly-changing specializations, and
- initial training for unavailable skills.

The agencies, in their reports to the Commission, cited many examples of achievement in each of these areas. This section of Employee Training in the Federal Service presents some of these examples under two headings:

- Purposes: Why do we train?
- Results: What did we accomplish through training?

WHY DO WE TRAIN?

Because of the interrelationship of the Henderson Subcommittee categories, and to gain a clearer perspective of agency training goals, the examples below are presented under headings (Improved Service to the Public, Staff Utilization, etc.) which reflect agency objectives in supporting various training activities.

Improved Service to the Public

Service to the public is one of the more important functions performed by Federal employees, and many agencies conducted training directed at improving this service.

Several loan officers with the Small Business Administration assigned to an area with a heavy Puerto Rican population were able to deal more effectively with their clientele after completing a Civil Service Commission course in Conversational Spanish.

In order to assist taxpayers during peak tax periods, the Treasury Department's Internal Revenue Service has developed a number of programs in the area of taxpayer education. Taxpayer Education Institutes are conducted throughout the United States just prior to and during the filing period. In addition, Adult Taxpayer Education classes and the Teaching Taxes Program for high school students are now conducted throughout the year.

Treasury's long-term training programs in Spanish, French, German and Russian have improved the capability of customs inspectors to communicate with foreign nationals, thus expediting baggage handling and passenger clearance.

At the Department of Agriculture, Information Division employees who attended a program on methods of communicating highly technical information to the public found their training useful in fulfilling their responsibility to translate scientific activities and accomplishments into layman's terms.

Occupational Flexibility

Training to expand occupational flexibility plays an important part in mission accomplishment by more fully utilizing the time and abilities of Federal employees.

A Department of the Army employee, after attending a 2-week course on the operation of a 12 Channel Auto Analyzer, was able to cross-train other employees in his unit. As a result, services to other departments were expanded without an increase in personnel.

The Defense Supply Agency, anticipating an operational transition to third-generation data processing equipment, provided training for all programmers, analysts, and machine personnel which proved to be most helpful in effecting a smooth and orderly conversion to new methods of electronically processing and storing management data.

In the motor equipment and communications activities of the General Services Administration, cross-training was provided in different occupational areas--for example, teletype operators were trained as switchboard operators and automotive inspectors as motor pool chiefs. Employees were thus able to perform effectively in more than one capacity.

A new concept in processing persons entering the United States, known as "one-stop inspection", involved a dramatic change in the duties of inspectors of the Bureau of Customs, Immigration and Naturalization Service, the Public Health Service, and the Plant

Quarantine Division of the Department of Agriculture. The new system requires that cross-training in the duties of each service's mission and functions be provided inspectors of the other agencies. A training program was developed and the system was implemented at the John F. Kennedy and San Antonio airports on a trial basis. The success of this program was recognized when the President directed that the "one-step inspection" system be installed at all international airports. The training program contributed directly to the successful installation of this system.

Staff Utilization

Training by a large number of agencies has been directed towards improved staff utilization and their reports show positive results.

Throughout Small Business Administration's field offices, loan servicing assistants were trained to perform less difficult duties previously performed by higher grade loan specialists, allowing the latter to spend more time on higher level technical and professional duties.

Forty carefully selected clerical level employees were placed in the Census Bureau's Technical Assistant Program. The program is designed to relieve professional employees of semi-professional work by providing them with highly skilled assistants.

At a Defense Supply Agency installation, employees from other directorates and offices completed a program which qualified them as Computer System Analysts in the Office of Data Systems in the installation. This program provides the agency with computer-trained personnel already familiar with the supply system who are able to become productive both quickly and effectively.

Creative Effort

It is vital to continuing excellence in Federal service that individual effort be both innovative and responsive. Employees who have completed training, particularly training designed to introduce new ideas, techniques and concepts, have exhibited creative effort.

Coast Guard engineers, applying the principles learned in Value Engineering Courses, have produced improved equipment designs which have led to simplified manufacturing and maintenance processes.

In the Army Weapons Command, an engineer who undertook research under a long-term training program materially assisted in increasing the Command's understanding of fracture mechanisms in high strength material. This resulted in important work in the prevention of premature fractures.

Increased Self-Development Activities

In a continuing effort to encourage employee self-development, the Army Missile Command announces available educational opportunities through special bulletins distributed periodically to each employee.

The Command counsels and assists employees who lack high school diplomas. Since the program began, forty-one employees have received their equivalency certificates and several have entered other governmental training courses and college undergraduate courses not previously available to them.

In the Domestic and International Business area of the Department of Commerce, employees whose jobs require a knowledge of a foreign language may learn it by scheduling themselves for individual training in the DIB self-study language booth.

At a public work center operated by Navy each of 117 employees identified as needing remedial education was counseled about educational opportunities open to him. As a result, a significant number enrolled in an evening school program. Improvement has averaged from two to three academic grade levels with positive effects on the productivity of trainees.

State-of-the-Art Training

Today's Federal service is constantly confronted with new technological advances. As a result agencies have found it imperative to keep their employees up-to-date.

The Smithsonian Institution sent 28 professional and scientific staff members to scientific meetings and conferences. In addition, the Smithsonian contracted with four distinguished scientists from such universities as Harvard and Princeton to come to Washington to deliver special lectures to the scientific staff relating to the latest advances in several critical areas.

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Several hundred computer programmers, computer operators, and employees in related occupations at the Census Bureau, Department of Commerce, were given special retraining programs to update their skills and knowledge.

National Aeronautics and Space Administration's Manned Spacecraft Center annually presents a course entitled "Manned Spacecraft: Engineering Design and Operation" to keep concerned employees abreast of state-of-the-art advances in various aspects of manned space flight.

The Division of Trading and Markets, Securities and Exchange Commission, noted that regulatory staff members who had participated in formal training exhibited a greatly increased knowledge of the practical problems involved in the mechanics of securities trading on an organized exchange. The program involved sending two or three teams of five financial analysts and/or attorneys to New York City for three days each for a first hand exposure to the problems of the New York Stock Exchange and its member firms. This is expected to materially improve the coordination between the Exchange and the SEC in discharging their mutual responsibilities under the securities laws. Where these responsibilities are understood, duplication of effort is reduced and appellate proceedings are conducted more rapidly and efficiently.

Department of the Army microbiologists found that the fundamental understanding of the nature of viruses obtained in a course on virology yielded a higher quality of technical guidance and resulted in the introduction of advanced techniques by those scientists who had attended the course.

WHAT DID WE ACCOMPLISH THROUGH TRAINING?

During fiscal year 1968, training made many significant contributions in the form of dollar savings, time savings, and increased productivity. The following examples are representative comments made by agencies in reporting the results of training.

Dollar Savings

The Navy's program for training selected technical personnel in the Principles and Applications of Value Engineering was continued by conducting nine seminars during fiscal year 1968. Two hundred fifty-six employees attended the seminars, and spent approximately seven of the ten days applying value engineering to current work projects. One seminar team projected first year savings on six projects to be approximately $880,000 from one activity. Savings through Navy-wide application of the recommendations from these projects has been estimated at $4,000,000.

Training on generator maintenance conducted by the Department of the Air Force created an in-house capability for performing the majority of generator repair work, thus saving $100,000.

Through a direct application of knowledge and techniques obtained during the program, participants in the Department of the Army's Work Simplification Training Course have made suggestions resulting in savings estimated at $97,000.

The Department of Transportation reports that the chief of the Hull Branch Division of a Coast Guard Yard, following the completion of a course on reinforced plastics, recommended design changes for the plastic boat construction program which resulted in direct savings of between $15,000 and $30,000.

A Department of the Army graduate of a Value Engineering Incentive Course was instrumental in saving $236,390 for the Federal Government. The employee designed a method through which OH-23 rotor blades marked for scrapping could be returned to an "as new" condition.

One Department of State employee, after training in a Rodent Control Program, initiated a procedure which saves the Agency for International Development an estimated $19,000 annually through improved storage operations at its mission in Vietnam.

A regional office of Interior's Bureau of Reclamation invested $1,250 to train a relay mechanic to maintain logging typewriters and other components of a computer system, and eliminated the need to call in a commercial maintenance specialist at a cost of $600 to $700 per visit.

Time Savings

At the Patent Office, a group of engineers from other disciplines who were provided training in basic electrical engineering no longer find it necessary to consult regularly with other examiners in order to understand and evaluate the electrical portions of the disclosures in their patent applications.

Law enforcement agents at the Department of the Treasury formerly found it necessary to send questioned documents to an expert for an opinion. Training provided the agents with the skill and knowledge to quickly determine the facts about questioned documents, enabling them to complete investigations and make arrests in less time.

Since completing a training program in the Russian language, a GS-13 engineer in Air Force's Directorate of Foreign Technology is able to provide critical information on Russian technological developments three months earlier.

Increased Productivity

The Defense Contract Audit Agency reports that increased participation in a time-shared computer system, made possible by training in advanced audit techniques, has eliminated many time-consuming manual calculations and freed auditors for more productive work. One region reports that training in applying multiple regression analysis has resulted in more accurate estimates of future costs.

As a result of training given to contract administration personnel in the Defense Supply Agency, an increase in contract administration workload has been handled without a corresponding increase in the total number of personnel doing the work.

The Environmental Science Service Administration of the Department of Commerce offered a fifty-hour home study course on radar for 64 of its technicians and supervisors. The program resulted in an additional 305 man-days of productive emergency maintenance field work--a five to ten percent increase in maintenance efficiency.

After completing a training course designed to improve job performance, telephone operators at Army's Fort Bragg have increased the number of telephone calls handled per day from 33,000 to over 40,000.

Quality of Work

Supervisors at an Air Force installation report that employees who attended the Material Management Academy are performing at a measurably higher level with regard to both quantity and quality of work. Initial classroom training is also more effective than on-the-job training in bringing new employees up to their full productive capacity.

II. PROGRAM CHARACTERISTICS

In over a million instances during fiscal year 1968, Federal employees participated in formal classroom training programs lasting at least eight hours and designed, in the words of the Government Employees Training Act, "to promote efficiency and economy in the operation of the Government and provide means for the development of maximum proficiency in the performance of official duties by employees thereof, to establish and maintain the highest standards of performance in the transaction of the public business, and to install and utilize effectively the best modern practices and techniques which have been developed, tested, and proved within or outside of the Government." This section of Employee Training in the Federal Service discusses these participants - who they were, where they went for their training, and the kind of training they received. Only summary data are presented in this report. Complete tables, including individual agency statistics for all reporting agencies are available in the Statistical Annex to Employee Training in the Federal Service, Fiscal Year 1968. As in the 1967 report, when an employee participated in more than one training program during the year each instance of training was counted separately; thus, while the total number of participants during fiscal year 1968 was 1,034,793, the number of individual employees involved was somewhat less.

Table 1

TOTAL TRAINED, 1967 & 1968

Agency	FY 1967	FY 1968	Change	Percent Change
TOTAL	1,008,780	1,034,793	+ 26,013	+ 2.6
Defense	527,304	521,510	- 5,794	- 1.1
Army	(204,599)	(172,773)	-(31,826)	- 15.6
Air Force	(145,069)	(122,688)	-(22,381)	- 15.4
Navy	(140,876)	(172,821)	+(31,945)	+ 22.7
Defense Supply Agency	(25,998)	(29,495)	+(3,497)	+ 13.5
Other Defense*	(10,762)	(23,733)	+(2,618)	+ 11.0
Post Office	75,323	92,499	+ 17,176	+ 22.8
Health, Education & Welfare	37,955	72,553	+ 34,598	+ 91.2
Agriculture	57,996	62,955	+ 4,959	+ 8.5
Interior	48,327	47,168	- 1,159	- 2.4
Treasury	66,231	38,813	- 27,418	- 41.4
Veterans Administration	40,189	38,605	- 1,584	- 3.9
Transportation	36,053	33,107	- 2,946	- 8.2
National Aeronautics & Space Administration	32,629	23,192	- 9,437	- 28.9
District of Columbia Government	8,322	16,807	+ 8,485	+101.9
Justice	13,327	15,324	+ 1,997	+ 15.0
Commerce	9,974	11,277	+ 1,303	+ 13.1
General Services Administration	8,216	12,409	+ 4,193	+ 51.0
Labor	4,590	8,858	+ 4,268	+ 93.0
Housing and Urban Development	4,311	8,311	+ 4,000	+ 92.8
Panama Canal Company/ Canal Zone Government	12,112	7,868	- 4,244	- 35.0
Selective Service System	1,651	3,977	+ 2,326	+140.9
Atomic Energy Commission	9,485	3,673	- 5,812	- 61.3
Small Business Administration	4,051	2,970	- 1,081	- 26.7
General Accounting Office	1,281	2,374	+ 1,093	+ 85.3
State	2,694	1,566	- 1,128	- 41.9
U. S. Information Agency	1,272	1,136	- 136	- 10.7
All Other**	5,487	7,841	+ 2,354	+ 42.9

* One Department of Defense component reported in 1968 but not in 1967. The figures for "Change" and "Percentage Change" have been adjusted to reflect this.

** 31 other agencies, each reporting fewer than 1,000 participants in fiscal year 1968.

Total training participation increased by about 26,000 from 1967 to 1968. Table 1 compares total 1967 and 1968 participation for the agencies reporting the largest participation in 1968. The largest proportionate increase was in the Selective Service System, which more than doubled its participation; the agency ascribes this to training needed to accomplish changes in policy and operations. Other large increases were reported by the District of Columbia Government, the Departments of Labor, Housing and Urban Development, Health, Education, and Welfare, and the General Accounting Office. Decreases in training participation, mostly necessitated by budget restrictions, were reported by several agencies; the greatest decreases were reported by the Atomic Energy Commission and the Departments of State and the Treasury.

WHO WAS TRAINED?

Of the 1,034,793 participants:

- 793,026 (or 77%) were men, and 241,767 (or 23%) were women. In fiscal year 1967, these proportions were 79% and 21%.
- 662,328 (or 64%) were General Schedule employees, 171,820 (or 17%) were trades and labor employees, and 200,645 (or 19%) were employed under other pay systems. (This latter group includes Postal Field Service employees, local board employees of the Selective Service System, employees of the Panama Canal Company and the Canal Zone Government, Youth Opportunity Campaign employees, professional

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employees of the Veterans Administration Department of Medicine and Surgery, foreign nationals, and several smaller categories.) In fiscal year 1967, the proportions were 66% General Schedule, 20% trades and labor, and 14% all other.

The increase in the number of women trained, both as a proportion of the total and as an absolute number, was substantial. (Table 2)

Table 2

TOTAL PARTICIPATION BY SEX, 1967 & 1968

	FY 67	FY 68	% Change
TOTAL	1,008,780	1,034,793	+ 2.6
Men	794,515	793,026	- .2
Women	214,265	241,767	+12.8

The greatest part of this increase occurred among women employed under "Other pay systems", principally in the Postal Field Service, the Selective Service System, and Youth Opportunity Campaigns in various agencies. There was also an increase in participation among General Schedule women, and a decrease in trades and labor employees of both sexes.

General Schedule employees, who make up less than half of the total Federal civilian workforce, received nearly two-thirds of the

training during the fiscal year. (Figure 1) This represents a slight decline from the 1967 figures. Training for trades and labor employees declined sharply, but these decreases were more than offset by the increase in training provided for employees under other pay systems. (Table 3)

Figure 1

PAY SYSTEMS OF PARTICIPANTS AND OF FEDERAL CIVILIAN WORK FORCE

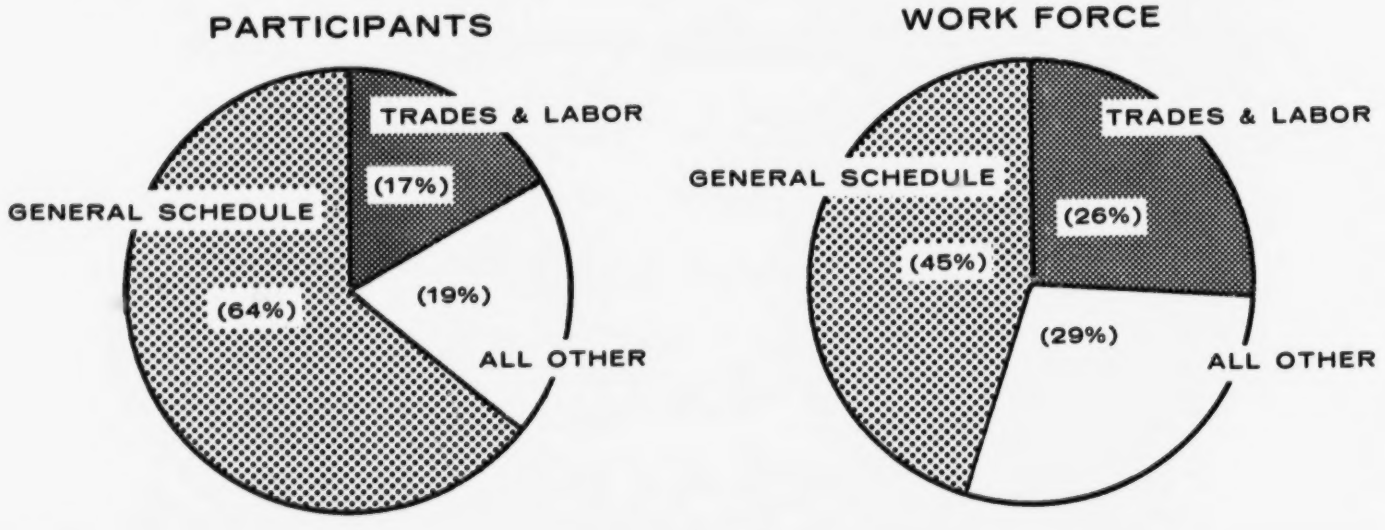


Table 3

TOTAL PARTICIPATION BY PAY SYSTEM, 1967 & 1968

	FY 67	FY 68	% Change
TOTAL	1,008,780	1,034,793	+ 2.6
General Schedule	669,390	662,328	- 1.0
Trades and Labor	200,016	171,820	-14.1
All Other	139,414	200,645	+43.9

In fiscal year 1968, the agencies were asked for information on the grade levels of their General Schedule participants. This data is shown in figure 2 for men and women participants. The difference between the two distributions is striking; the number of men trained peaks sharply in the GS-9 through 12 range, while the number of women trained is highest in the GS-1 through 4 group. However, to be truly meaningful, these numbers must be compared with the workforce within each grade range. This has been done in figure 3, which shows participation per thousand employees within each of the five grade groups. (For example, for every thousand women in grades GS-13 through 15, there were 606 instances of participation; for every thousand men in the same grade range there were 583 instances.) The distributions here are quite different from those in figure 2; participation by men is highest in the GS-5 through 8 range, while participation by women is greatest in GS-13 through 15. The implications are clear; while General Schedule women do in fact get less training than their male counterparts, the disproportion is almost entirely among those employees at GS-8 and below. At GS-9 and above, men and women are generally trained on an equal basis.

FIGURE 2

SEX AND GRADE OF GENERAL SCHEDULE PARTICIPANTS

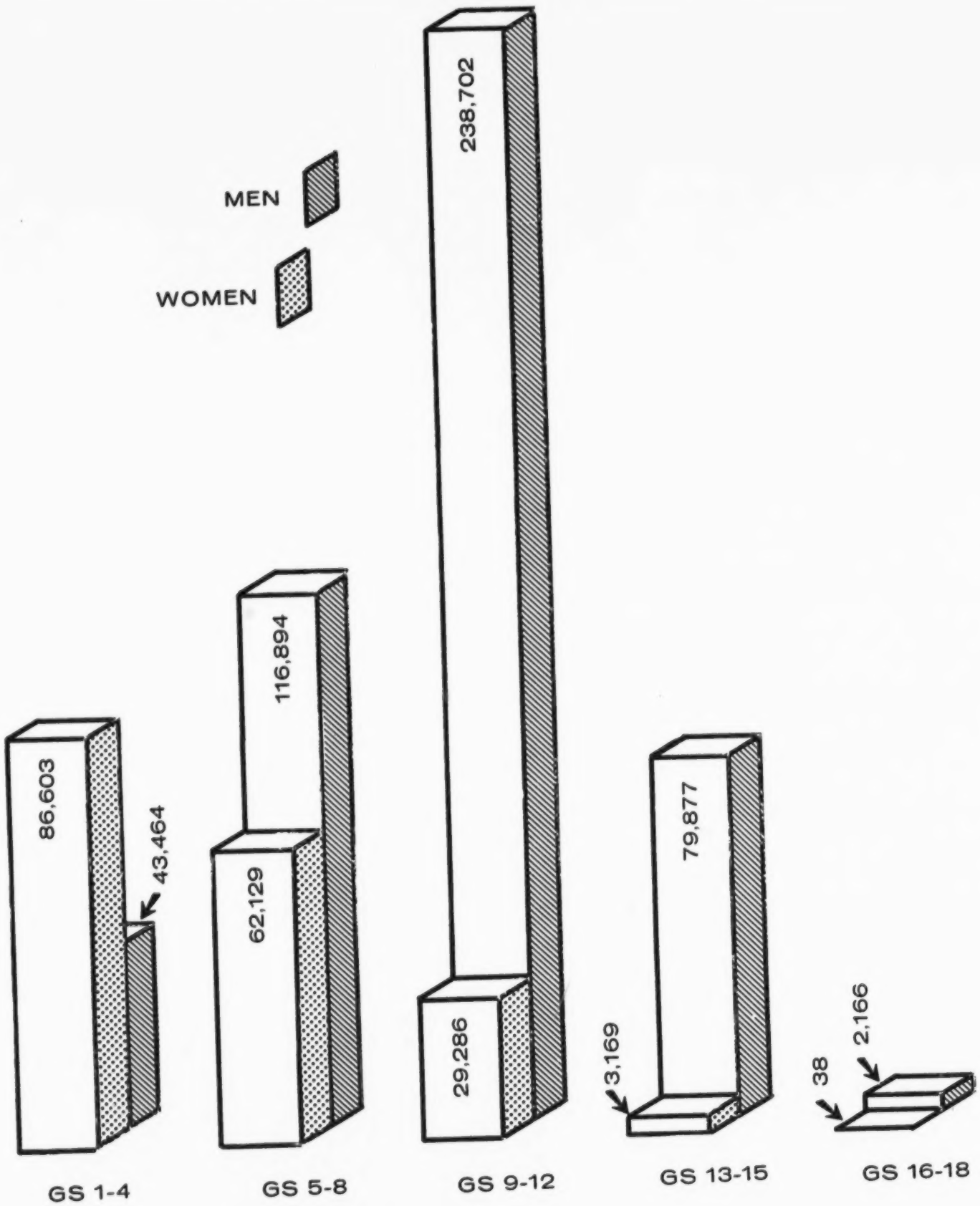
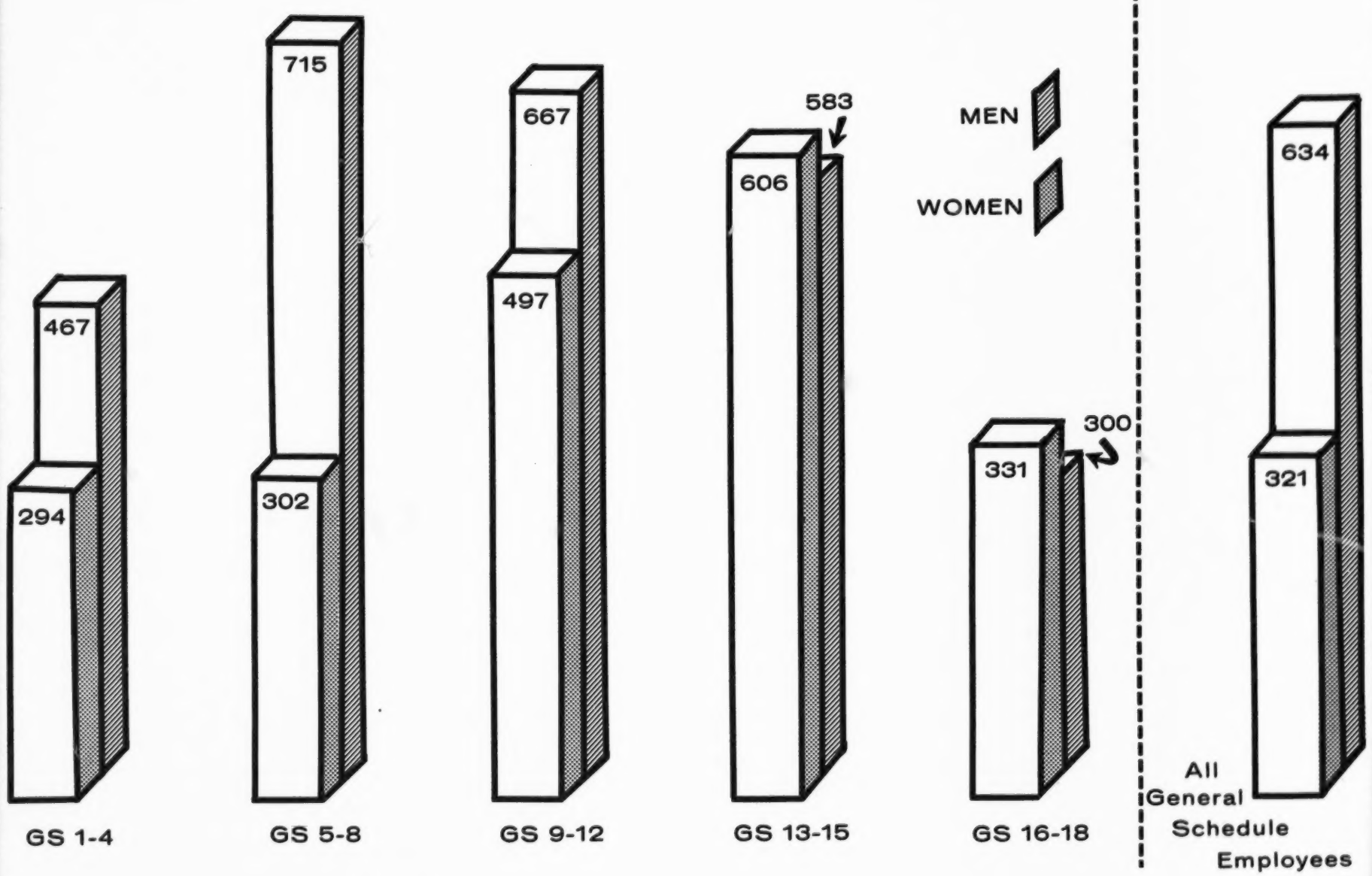


FIGURE 3

COURSE ATTENDANCE PER THOUSAND EMPLOYEES

General Schedule Only



HOW WERE THEY TRAINED?

In addition to reporting training participation by sex and pay system, the agencies were asked to furnish numerical data on source and category of training. The sources specified were internal, interagency, and non-Government; non-Government training was broken into long-term (more than 120 days) and short-term (120 days or less). The categories used, and their definitions, were:

Professional or Scientific, including courses designed to keep professional and scientific personnel such as physicians, lawyers, engineers, physicists, mathematicians, etc., abreast of technological advancements and to impart new knowledges in specialized fields.

Technical, including courses designed to enhance the skills required to perform the tasks or operations of a job. Into this category fall specialized "how to" courses in fields such as crafts and trades, position classification, procurement analysis, computer programming, claims examining, etc.

Supervisory or Management, including courses designed to enhance supervisory, managerial, administrative or executive skills, knowledges and abilities. This category includes political science, business administration, public administration, and related fields.

Other, including programs not appropriately categorized above. For example:

Apprentice Programs
Civil Defense
Clerical and Office Skills
Communication Skills
Consumer Education
Defensive Driving
Fire Prevention
Firefighting
First Aid
Food, Sanitation and Health
Languages
Medical Self-Help
Orientation
Safety
Youth Opportunity Campaign Programs

Table 4 summarizes the categories of training received by Federal employees during the fiscal year and the sources of this training. There was little change from 1967 in the proportion of the training received from each source; the proportions for 1968 were 79% internal, 6% interagency, and 15% non-Government and the corresponding figures for 1967 were 80%, 5% and 15%.

Table 4

SOURCE AND CATEGORY OF TRAINING

Category	Source				
				Non-Government	
	Total	Internal	Interagency	Short-Term	Long-Term
Total	1,034,793	817,734	57,923	157,132	2,004
Professional or Scientific	97,773	44,540	4,678	47,330	1,225
Technical	511,173	417,511	23,195	69,901	566
Supervisory or Management	178,749	135,071	20,620	22,887	171
Other	247,098	220,612	9,430	17,014	42

Short-term non-Government training accounted for almost 99% of all non-Government training and 15% of the total training effort in fiscal year 1968. Of the 157,132 participants in short-term training, 84% were men and 16% were women. Eighty-one percent of those receiving short-term training were employed under the General Schedule, while 13% were

trades and labor employees and 6% in other pay systems. The two largest categories of short-term training were technical, 44%, and professional or scientific, 30%. Short-term non-Government training increased by 6,459 participants over FY 1967 for a growth of 4.2%.

Interagency and long-term non-Government training are discussed in some detail in Part III, Special Interest Areas.

Nearly half of all training during the year was in the technical category, and the agencies provided most (82%) of this training through their own resources. Technical training is, by definition, closely related to the performance of a specific job, and the agencies are usually best able to meet the need for this training through their own resources. Where they could not, they made use of non-Government facilities (for 14% of technical training) or interagency courses (for 4%).

Agencies also relied on their own resources to satisfy the need for supervisory and managerial training; 76% of this training was obtained within the employing agency, 13% came from non-Government sources, and 11% from interagency programs. In this category, agencies were able to furnish much of the training themselves and, in many instances, to share the training with others. Non-Government facilities were called upon for courses in political science, business administration and related fields.

Training needs in the professional and scientific category usually demand highly specialized and extremely advanced courses, and the agencies utilized non-Government facilities to provide 50% of this training. Often, however, the agencies are the best or only source of this knowledge, and therefore 45% of professional and scientific training was conducted on an internal basis. In many cases it was feasible to share this training with other agencies, and the remaining 5% of training in this category was provided through interagency facilities.

The remaining category - "Other" - was almost entirely (89%) conducted internally. However, some of these courses (such as safety and firefighting) were given on an interagency basis, and others (such as language training and public speaking) required the use of non-Government facilities.

WHO MANAGED THE TRAINING?

The size of the agency training staffs and the amount spent for their salaries are important measures of the scope of training in the Federal service. To ascertain staff size and salary expenditures in fiscal year 1968, agencies were asked to report personnel engaged in training under two categories, full-time and part-time.

Part-time personnel are defined as civilian personnel engaged at least 25% of the time, but less than full-time, in activities directly related to training. Included among this group are part-time instructors,

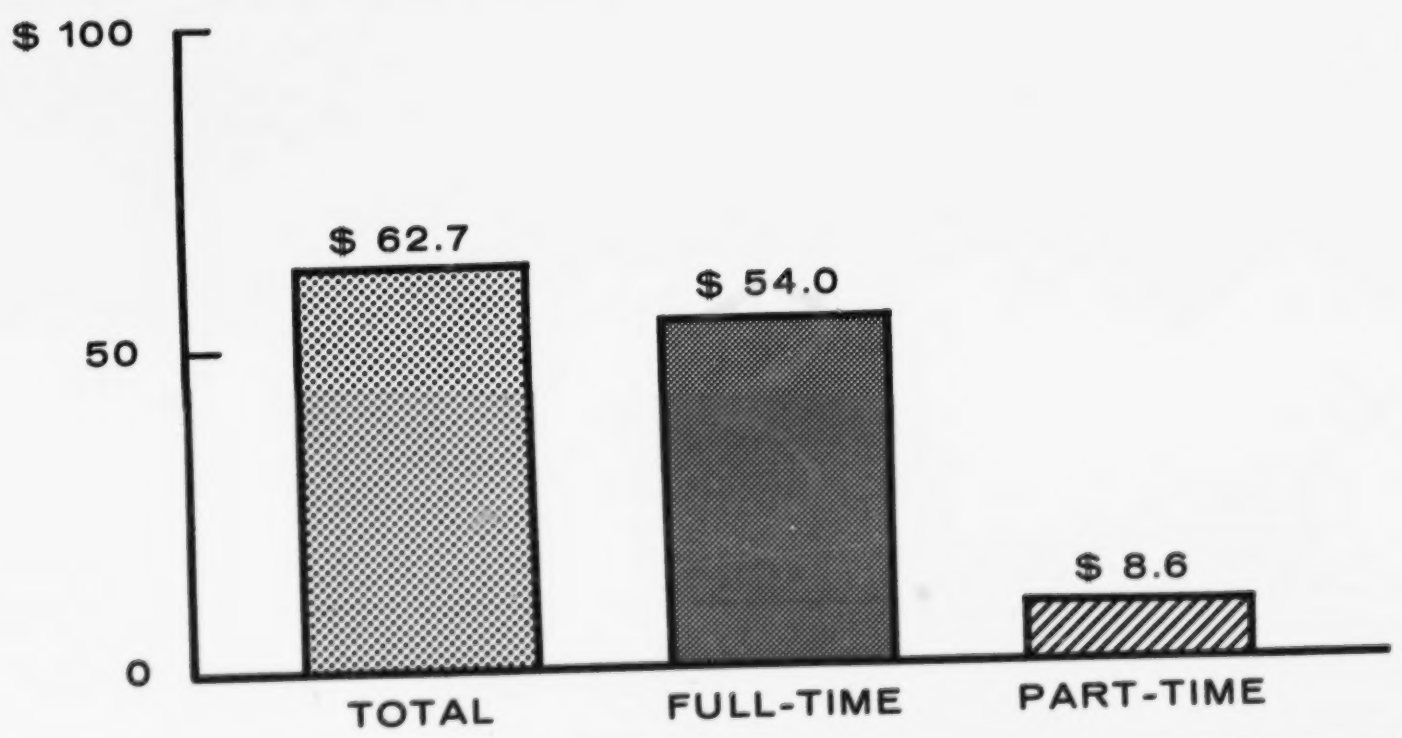
administrative personnel whose duties include substantial training responsibilities, and clerical and support personnel who devote part of their time to the training of Federal employees.

Thirty-five agencies reported employing part-time training personnel who devoted more than 1,000 man-years to agency training efforts and received $8,648,179 in salary. This figure represents nearly 14% of the total amount of money expended by agencies for the salaries of personnel engaged in agency training activities. (Figure 4)

Figure 4

SALARIES OF PERSONNEL ENGAGED IN AGENCY TRAINING ACTIVITIES, FY 68

(Millions of Dollars)



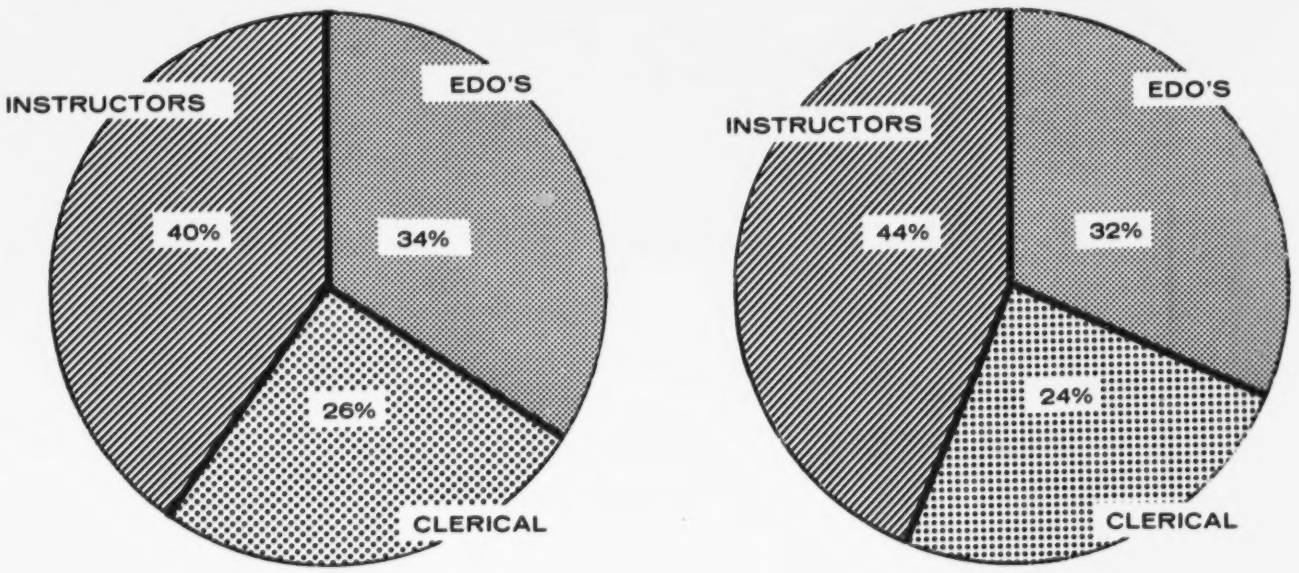
In contrast, $54,028,208 was spent for the salaries of 5,605 full-time training personnel by 42 reporting agencies. This is an increase in both total salaries received (18%) and total training

personnel engaged full-time (11%) over the figures reported in fiscal year 1967, when 5,029 full-time training personnel received $45,680,240.

Of over $54 million spent in fiscal year 1968 for the salaries of full-time training personnel, $20,475,874 was for the salaries of 1,820 Employee Development Officers, $26,221,396 was for the salaries of 2,462 full-time instructors, and $7,330,938 went to pay the salaries of 1,323 clerical and support personnel. (Figure 5)

Figure 5

FULL-TIME TRAINING PERSONNEL, 1967 & 1968



FISCAL 1967
5,029

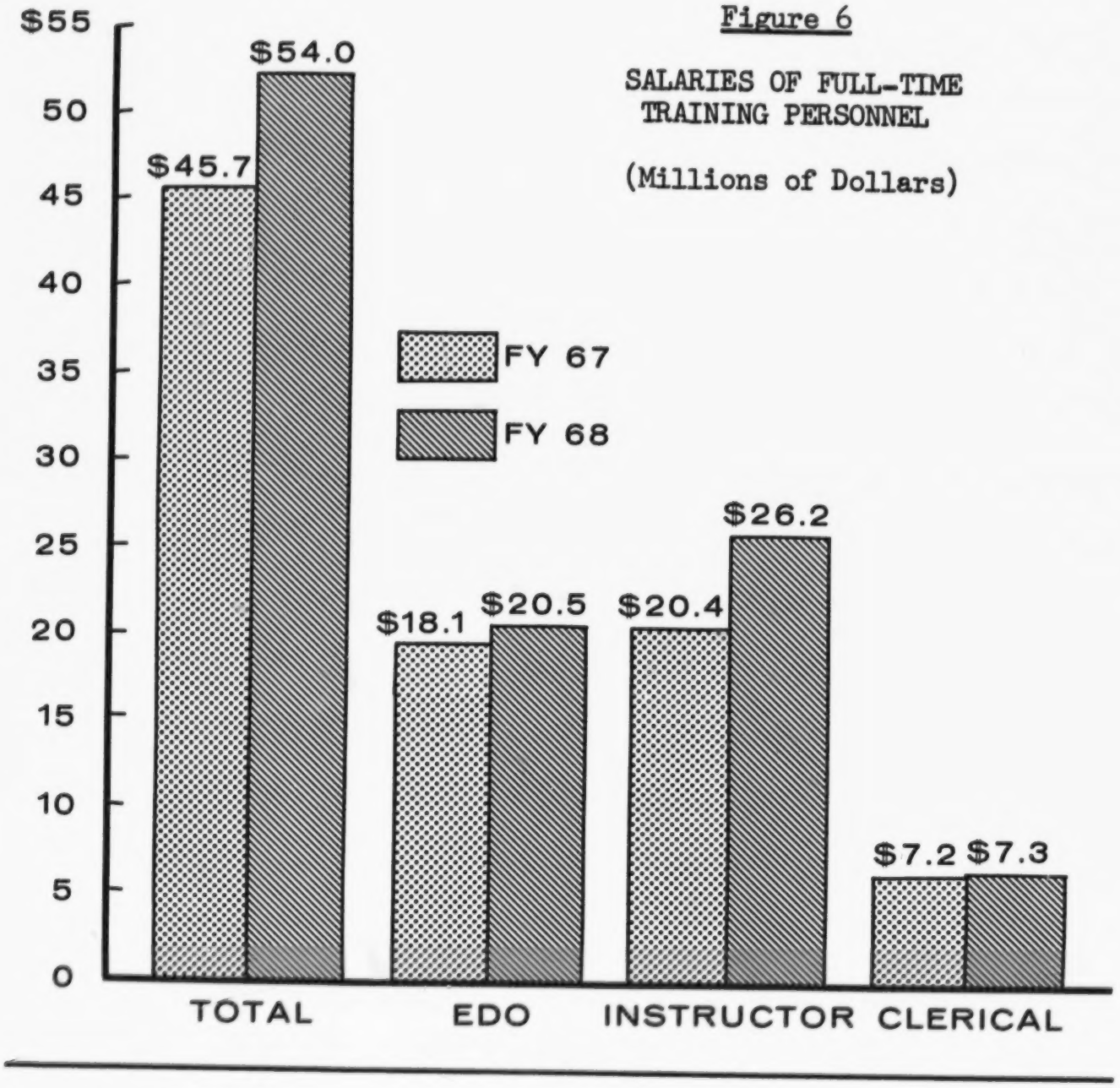
FISCAL 1968
5,605

This is in comparison with the 1,730 Employee Development Officers, 2,005 instructors and 1,294 clerical and support personnel who received $18,114,354, $20,407,664, and $7,158,222 respectively for their full-time agency training activities in fiscal year 1967. (Figure 6)

Figure 6

SALARIES OF FULL-TIME TRAINING PERSONNEL

(Millions of Dollars)



The occupational mix of full-time training personnel changed only slightly between fiscal years 1967 and 1968. The number of Employee Development Officers reported decreased as a percentage of the total number of full-time personnel engaged in training, falling from 34% of the total in fiscal year 1967 to 32% in fiscal year 1968. The number of Employee Development Officers, however, increased by 90 and total Employee Development Officers' salaries rose $2,316,520.

The number of instructors engaged full-time in training went up 457 employees, from 40% to 44% of the total number of full-time personnel reported, and instructors' salaries increased by $5,813,732.

Finally, the number of clerical and support personnel increased by 29; this represents a change from 24% to 26% of the total number of full-time training personnel reported, and is reflected in a $172,716 increase in salaries received.

Internal training constitutes the greatest single source of training conducted for employees in the Federal service. It is undertaken by agencies in an effort to meet internal training needs, and it is through internal human and material resources that these needs are met. In fiscal year 1968, Federal agencies have placed a greater emphasis on training activities than ever before. This is reflected, in one instance, in the number of Employee Development Officers, instructors, and clerical and support personnel engaged in agency training efforts. Both the total number of full-time and part-time training personnel employed and the total salaries they received exceed the totals reported for fiscal year 1967. As more and more agencies recognize the need to train greater numbers of employees, the number of agency personnel involved in carrying out this training can be expected to increase even more.

HOW MUCH DID IT COST?

The agencies spent nearly $31 million for external (i.e., interagency and non-Government) training during fiscal year 1968.[2/] This represents a drop in cost of 13% from 1967, even though participation in these programs increased by 12% during the same period. (Tables 5 and 6)

Of the total of $31 million, $21 million was spent for short-term non-Government training, $6 million was spent for interagency training, and $3½ million was spent for long-term (more than 120 days) training in non-Government facilities.

Table 5

EXPENDITURES FOR INTERAGENCY AND NON-GOVERNMENT TRAINING, FY 1968

Type of Expense	Total	Interagency	Non-Government	
			120 days or less	More than 120 days
Total	$30,757,899	6,169,902	21,079,413	3,508,584
Tution and Related Fees	19,955,639	3,504,029	14,449,146	2,002,464
Transportation	4,287,756	1,047,628	2,652,882	587,246
Per Diem	6,514,504	1,618,245	3,977,385	918,874

2/ Work continues on the development of a uniform method of recording and reporting data on internal training programs. When this system is completed, it will be possible to report substantially more complete data on the cost of training.

Table 6

EXPENDITURES FOR EXTERNAL TRAINING, 1967 & 1968

	1967	1968	Change	% of Change
Total	$34,632,460	$30,757,899	-$3,874,561	-13
Interagency	4,637,980	6,169,902	+ 1,531,922	+33
Non-Government:				
120 days or less	27,714,388	21,079,413	- 6,634,975	-31
more than 120 days	2,280,092	3,508,584	+ 1,228,492	+54

Of each $100 spent for external training:

$20.06 went for interagency training

($11.39 (57%) for tuition and related fees,

$ 3.41 (17%) for transportation, and

$ 5.26 (26%) for per diem);

$68.53 went for short-term non-Government training

($46.98 (68%) for tuition and related fees,

$ 8.62 (13%) for transportation, and

$12.93 (19%) for per diem); and

$11.41 went for long-term non-Government training

($ 6.51 (57%) for tuition and related fees,

$ 1.91 (17%) for transportation, and

$ 2.99 (26%) for per diem).

The total expenditure for interagency training increased 33% from 1967 to 1968, while participation in these programs increased 18%. This increase is entirely confined to expenditures for tuition and related

fees and for per diem; spending for transportation decreased by some 10% between the two years. This may indicate that more agencies are taking advantage of the cost-sharing provisions of the Training Act, and that the courses offered were longer in 1968 than they were in 1967.

Short-term non-Government training continues to be the largest category of expense, but expenditures for this training decreased sharply--by 31%--from 1967, while participation showed a 4% increase. However, previous reports included, in some cases, training costs arising out of initial procurement of equipment (factory training). These expenditures are not regarded as training costs under the Government Employees Training Act, and they have been excluded from the fiscal year 1968 data, thus accounting for the sharp drop in the cost of this type of training.

While participation in long-term non-Government programs nearly doubled in 1968, the cost of these programs rose by only 54%. This increase was evenly spread among tuition and related fees, transportation and per diem.

III. SPECIAL INTEREST AREAS

INTERAGENCY TRAINING

Participation in interagency training, including courses of less than eight hours duration, reached a total of 104,161 in fiscal year 1968.[3/] This is an increase of 24,421 participants, or 31% over fiscal year 1967. One-third of the increase in participation occurred in courses of eight hours or more offered by the Civil Service Commission, and two-thirds in courses of less than eight hours offered and conducted by other agencies. (Tables 7a and 7b)

Table 7a

PARTICIPATION IN INTERAGENCY TRAINING, 1967 & 1968

(BY COURSE SPONSOR)

	FY 67	FY 68	Change	% of Change
TOTAL	79,740	104,161	+24,421	+31
In CSC Courses	36,430	45,326	+ 8,896	+24
In Other Agency Courses	43,310	58,835	+15,525	+36
Other Agency Courses of 8 hours or more	(12,771)	(12,597)	(- 174)	(- 1)
Other Agency Courses of less than 8 hours	(30,539)	(46,238)	(+15,699)	(+51)

3/ All data for this report are based on courses of 8 hours or more duration unless stated otherwise as in Tables 7a and 7b. The figures for courses of less than 8 hours duration were derived by comparing the statistical summaries with the data submitted in response to the questions on interagency training in part E of the Training Report.

Table 7b

PARTICIPATION IN INTERAGENCY TRAINING, 1967 & 1968

(BY COURSE DURATION)

	FY 67	FY 68	Change	% of Change
TOTAL	79,740	104,161	+24,421	+31
In courses of 8 hours or more	49,201	57,923	+ 8,722	+18
In courses of less than 8 hours	30,539	46,238	+15,699	+51

A total of 45,326 participants in fiscal year 1968 attended one or more of the 188 courses offered by the Civil Service Commission in Washington, D. C., and in the field, primarily for employees of other agencies. Most of these courses were in the areas of ADP management, financial management, general management, personnel management, and communications and office skills.

The remaining 58,835 participants attended the more than 300 courses offered by 26 agencies other than the Civil Service Commission. Of this group, approximately 16% attended training programs which agencies conducted primarily for their own employees; another 66% attended programs which agencies offered primarily for employees of other agencies; and the remaining 18% were employees of agencies presenting these latter programs. (Table 8)

Table 8

PARTICIPATION IN INTERAGENCY TRAINING

"Host" Agency	Total Number of Employees Trained	Employees Of Other Agencies Attending Courses Conducted Primarily for Employees of Host Agency	Employees of Other Agencies Attending Courses Conducted by Host Agency Primarily for Employees of Other Agencies	Employees of Host Agency Attending Courses Conducted by Host Agency Primarily for Employees of Other Agencies
TOTAL	104,161	9,096	84,072	10,993
Civil Service Commission	45,326	0	44,917	409
General Services Administration	23,534	47	21,519	1,968
Agriculture	6,838	844	749	5,245
Post Office	5,268	165	5,082	21
Health, Education and Welfare	3,913	348	2,535	1,030
Labor	3,848	55	3,476	317
Defense	3,357	2,944	390	23
D. C. Government	2,535	21	1,621	893
Interior	2,381	1,150	1,124	107
Veterans Administration	2,123	787	598	738
Treasury	1,467	437	940	90
Transportation	1,088	1,088	0	0
All Other *	2,483	1,210	1,121	152

* 15 Other agencies, each reporting fewer than 1,000 participants

The courses offered by the 26 agencies covered a wide range of subject areas, including such courses as Astrogeophysics, offered by the Department of Commerce; Human Resources Development, offered by the Department of Labor; and Microbiology, offered by the Department of the Interior. (Appendix A) In areas of common interest, such as supervisory training, shorthand, etc., several agencies offered courses in the same subject area.

Interagency training opportunities were publicized in a variety of ways. Many courses were listed in the Civil Service Commission's central and regional offices' Interagency Training Bulletins; other courses were publicized by means of brochures, flyers, individual letters, personal contacts, announcements at professional association meetings, etc. The directory of agency training centers, published by the Civil Service Commission, also contains descriptions of training which is often available on an interagency basis.

A number of agencies reported that they plan to make additional interagency courses available in fiscal year 1969. (Appendix B) Several agencies suggested additional areas where interagency training could effectively meet agency training needs, and the Commission's Bureau of Training is taking steps to coordinate the development of the necessary programs.

LONG-TERM NON-GOVERNMENT TRAINING

In fiscal year 1968, 2,004 Federal employees participated in long-term non-Government training (defined as training through non-

Government facilities in courses of 120 days duration or more), an increase of 825 or 70% over the previous fiscal year. Of these employees, 95% were men, and 5% were women. Most of the training -- 61% -- was in the professional and scientific category. (Table 9)

It should be noted that of the total enrollment in long-term training over 28% of the participants were in three programs. These were the Air Forces' Mechanic Learner program designed to develop capability in aircraft maintenance, the Career Education Awards Program designed to assist in early identification and development of potential high-level executives, and the Educational Program in Systematic Analysis designed to develop analytical capability in the Planning, Programming and Budgeting System and other systematic analysis techniques.

Table 9

LONG-TERM NON-GOVERNMENT TRAINING BY CATEGORY

	Total		Men		Women	
	No.	%	No.	%	No.	%
TOTAL	2,004	100	1,904	100	100	100
Professional & Scientific	1,225	61	1,165	61	60	60
Technical	566	28	533	28	33	33
Supervision & Management	171	9	167	9	4	4
Other	42	2	39	2	3	3

The total amount expended for long-term training in fiscal year 1968 was $3,508,584, an increase of $1,228,429, or 54% over fiscal

year 1967. Over half of the amount spent in fiscal year 1968 was for tuition and related fees. (Table 10)

Table 10

EXPENDITURES FOR LONG-TERM NON-GOVERNMENT TRAINING

	Amount	%
TOTAL	$3,508,584	100
Tuition and Related Fees	2,002,464	57
Transportation	587,246	17
Per Diem	918,874	26

Most--77%--of the participants were General Schedule employees; another 22% were trades and crafts employees, and the remainder were employed under other pay systems. The grade levels of the General Schedule participants ranged from GS-4 to GS-17, with an average grade of about GS-11. (Table 11)

Table 11

LONG-TERM TRAINING BY PAY SYSTEM AND SEX

Pay System and Level	Total	Men	Women
TOTAL	2,004	1,904	100
GS-16-17	10	10	0
GS-13-15	510	504	6
GS- 9-12	837	801	36
GS- 5- 8	185	137	48
GS- 4	4	4	0
Trades and Crafts	442	433	9
Other	16	15	1

The trainees represented 131 different occupations, the most common being Mechanic Learner (23%), Aerospace Engineer (7%), and Physicist (6%). Table 12 lists the ten most common occupations represented in long-term training in fiscal year 1968. Of the remaining participants, 707 represented 129 other occupations, each with less than three percent of the total. (Information was not available on 228 participants.)

Table 12

OCCUPATIONS OF PARTICIPANTS

Occupations	Number	% of Total
Mechanic Learner	405	23
Aerospace Engineer	123	7
Physicist	110	6
Electronic Engineer	90	5
General Engineer	63	4
Digital Computer Systems Analyst	59	3
Civil Engineer	58	3
Mechanical Engineer	58	3
Chemist	58	3
Physical Scientist	58	3

The participants studied at over 200 schools or universities in the United States and in 14 foreign countries. Enrollments in foreign universities were primarily in the professional and scientific category. Appendix C lists all those colleges and universities in the United States which were utilized by ten or more participants, along with other foreign and domestic facilities regardless of number attending.

PERSONNEL MANAGEMENT TRAINING

The attention focused upon the area of personnel management during the past few years through agency programs, as well as the many new programs offered by the Commission, makes it important that agencies share their experiences and results of training in those programs. Therefore, agencies were asked to describe their programs for planned staffing and development in personnel management at the entry levels.

Less than one-third of the agencies who reported have programs in personnel management, and for the most part they were the larger Federal agencies. Agencies reported on the source and duration of formal programs, the methods and types of training provided, plans for the placement and utilization of trainees, and plans for training programs and forecasts of staffing requirements for the next three years.

In meeting their personnel management staffing needs, agencies have utilized internships almost to the exclusion of any other staffing program. The interns come primarily from the Management Intern program and the Federal Personnel Intern program. A few agencies organized their own intern programs by selecting candidates from the Management Intern and FSEE registers. A third category of interns included those involved in broad administrative training programs where personnel management is one segment.

Interns and trainees received training in personnel management primarily through rotational assignments, including service at field installations; on-the-job training under close observation and guidance of a supervisor; and formal classroom training. The latter consisted primarily of university course work and personnel management courses offered by the Civil Service Commission's Personnel Management Training Center. In addition, trainees were encouraged to participate in self development activities, including outside readings and other informal developmental endeavors.

The Departments of Health, Education and Welfare, Interior and the Air Force have established career management programs for personnel management specialists. For example, Interior developed a pilot career program for personnel management specialists that is now ready for department-wide implementation. It includes an inventory and referral system, a plan for selection and development, formal training agreements, rotational assignments and career patterns flexible enough to meet the needs of individual employees and bureaus.

The majority of agency programs for planned development in personnel management are one to two years in length with the largest number of programs being one year. Most two year programs are for Federal Personnel Interns. At the extremes were a few six month programs and Health, Education and Welfare's three year program.

The number of entry level employees in personnel management reported by agencies for fiscal year 1968 ranged from one to three hundred. Most of the trainees were in the following speciality categories: personnel administration, personnel clerical and personnel staffing, position classification, employee management relations and cooperation, and employee development.

The projected need for personnel management trainees in each of the next three years varies greatly with the size of the agency. For example, the Department of the Army projects a need for approximately 775 trainees, while the Federal Communications Commission is planning for one trainee each year over the next three years. Most agencies use entry level interns and place them in GS-5 or GS-7 positions. These employees are generally college graduates with no previous government experience. Even within an agency there may be differences in staffing. For example, the National Aeronautics and Space Administration's Manned Spacecraft Center at Houston and the Langley Research Center both use the Management and Administrative Intern programs to meet basic manpower needs; the Lewis Research Center and the Kennedy Center, on the other hand, attempt to fill their vacancies with experienced personnel.

Very few agencies reported any systematic approach to the evaluation of their planned staffing and development. However, both the National Bureau of Standards and the Atomic Energy Commission

are planning evaluation programs. The National Bureau of Standards Office Staff Development Plan will follow this model:

1. Quarterly follow-up meetings or interviews with selected individuals to determine progress and to accept suggestions for modification (all at least once a year).
2. Random sample of operating and management officials to identify the impact of change experienced.
3. Yearly appraisal of a comparison between program objectives and current results.

STATE AND LOCAL GOVERNMENTS

In October, 1968, the Intergovernmental Cooperation Act became law. This act will permit Federal employees to work much more closely with their State and local counterparts in programs and in problem areas which involve multiple layers of government. Even before the Intergovernmental Cooperation Act was passed, however, Federal agencies were using a variety of training programs to equip their employees with the skills and knowledges they need to work effectively with State and local governments. The agencies described some of these programs in their reports.

Health, Education and Welfare rotated approximately 100 key field managers to headquarters for one or two week assignments with Federal-State relations groups, and the National Center for Radiological Health gave 2,000 Federal employees training about State and local health programs, problems, and needs.

An intern program at Housing and Urban Development includes assignments to State and local governments involved with HUD-related programs. The San Francisco Regional Offices, in cooperation with the League of California Cities, assigned 15 of these interns to spend a month working with one of the nine municipal governments in the San Francisco Bay area. The interns were assigned to the office of the mayor or city manager and then rotated through the principal city departments, attending all meetings of the city council and of boards and commissions concerned with the department in which they were working.

Interior's Bureau of Mines includes as part of its course work and job training for Federal Coal Mine Inspectors a special phase directed toward the practices and problems involved in getting along with State and lcoal officials. Interior also presented a departmental seminar on Intergovernmental Relations and Natural Resources Administration.

At Justice, the United States Attorney's Office conducted a seminar for United States Attorneys and their First Assistants to increase their skill in working with State and local officials in the area of civil disobedience. At Selective Service, new appointees of State Governors are given an extensive orientation to State-Federal relations.

Agriculture's Soil Conservation Service developed two new courses in the area of relationships with State and local governments, one of which is devoted to understanding the various levels of government and their responsiblities. Many agencies follow the practice of including

training of this kind in other training programs, increasing the effectiveness of their employees in their relationships with other government workers as well as increasing their technical competence. Agricultural Stabilization and Conservation Service field office employees are trained in techniques for working with local governments in planning and implementing rural development programs.

Air Force Civilian Personnel Office staffs, as part of their regular training, are provided orientation and training in working with State and local educational institutions, State employment offices, and officials connected with Office of Economic Opportunity and Equal Employment Opportunity Commission programs.

In addition to specific training about Federal-State relationships, agencies also participate in cooperative training ventures by:

1. Allowing State and local officials and employees to attend Federal training programs.
2. Using State and local government personnel as resource personnel or instructors in Federal training programs.
3. Supplying Federal personnel as resource personnel or instructors for State and local training programs.
4. Sending Federal employees to State and local training programs.
5. Jointly developing courses and course materials.

AGENCY TRAINING CENTERS

The growing and changing training needs of the Federal service are often met by agency training centers, which are established by agencies to provide specialized, agency-oriented training programs on a continuing basis. Agency training centers are defined here as separate entities or identifiable organizations, with a specific budget allotment or fund control, a curriculum or series of courses offered on a continuing basis, and a specific manpower ceiling or staff complement.

In fiscal year 1968, 16 agencies operated 108 training centers (compared with 100 in 1967) which provided training for 96,639 Federal and non-Federal employees at a cost of more than $10½ million. These centers are located in thirty states as well as in the Panama Canal Zone, Germany, and Viet Nam, and they employ 1,879 faculty and staff members.

The Bureau of Training publishes a comprehensive directory, Agency Training Centers for Federal Employees, which provides management and training officials throughout the Federal Government with up to date information on the number and variety of programs offered at these centers and on the general characteristics of these valuable resources for the training of Federal civilian employees.

OFF-CAMPUS STUDY CENTERS

Off-campus study centers have evolved because of (1) the desire of Federal employees to develop their capabilities and (2) the need of agency management to solve some of their problems by sending selected employees to high-quality university courses. These off-campus study centers are cooperative arrangements between a Federal agency and a college or university to provide educational opportunities to Federal employees at the Federal installation involved. The agency may provide classroom facilities, training equipment, or teaching aids; the university provides the instructional program. The faculty usually consists of regular university staff supplemented by qualified agency employees who instruct on their own time and are paid by the universities for this service.

In fiscal year 1968, 14 Federal agencies sponsored a total of 129 off-campus study centers in cooperation with 91 schools and universities. Nearly 26,000 employees participated in a wide array of courses and programs offered at centers located in 30 states, the District of Columbia, Puerto Rico and Europe. (In 1967, 12 agencies operated 102 centers and 18,000 employees participated.)

The Bureau of Training publishes and periodically up-dates a directory, Off-Campus Study Centers for Federal Employees, in order to furnish training and management officials and employees with current information on the operation of individual off-campus centers and on the general characteristics of these cooperative educational resources.

STUDIES AND REPORTS

As the role of training in the Federal Government grows, there is an increasing recognition of the need to conduct research into the way the total job is done and into ways in which it might be done better. In order that the knowledge gained from these studies may be shared among all agencies, the Bureau of Training annually compiles Studies and Reports Relating to Training and Education, which is intended both as a reference for study topics and as a source of examples of research design.

In fiscal year 1968, fourteen agencies included information on studies and reports as a part of their annual training report to the Civil Service Commission. These agencies had several purposes in conducting these studies:

- To evaluate training programs
- To evaluate specific training methods
- To determine (and to find ways to determine) training needs
- To develop manpower utilization training programs

Descriptions of these studies (as well as descriptions of studies reported to the Commission in fiscal year 1967) are contained in the current edition of Studies and Reports Relating to Training and Education.

IV. APPENDICES

APPENDIX A

FISCAL YEAR 1968 INTERAGENCY COURSES AND SUBJECT AREAS

Agriculture

- Veterinary Medicine
- Meat, Poultry, Livestock Slaughter and Grain Inspection
- Range Wildlife
- Recreation and Lands
- Civil Defense
- Seminars in Middle Management
- One-Year Internship in ADP
- Plant Quarantine Technical Programs
- Engineering
- Fire Control
- General Management
- Watershed and Timber Management
- Safety
- Seminars in Executive Development
- Kepner-Tregoe Problem Solving and Decision Making

Commerce

- Retirement Planning
- Meteorology
- Chemical Engineering
- Mathematics
- Electronic Maintenance
- Patent Examiner Initial Training
- Chemistry
- Electrical Engineering
- Digital Computer Programming
- Astrogeophysics
- Computer Science
- Physics
- GXR-8-Compass, Loran and Radar
- Reading Improvement
- Operations Research
- Engineering

Defense

Air Force

- Management Course for Air Force Supervisors
- Human Relations
- Conference Leadership
- Work Methods and Standards
- Value Engineering
- Mechanics of Fluid Instrumentation
- System Measurement and Instrumentation
- Equal Employment Opportunity
- Air Force Employee-Management Cooperation
- Completed Staff Action
- Management and Communications Skills
- Methods Time Measurement
- Statistical Quality Control
- Theodolite Calibration
- High Reliability Soldering
- Rapid Reading
- Personnel Administration

Army

Civil Defense
Cartography
Supervisory and Middle Management Training
Pneumatic Tire Inspection Classification and Coding
Scientific Vulcanization
Chemical, Biological and Radiological Training
Projectionist
Records and Correspondence Management
Safety
Personnel Management for Executives
Conference Leadership
Inspection, Classification and Processing Rubber Tired Road Wheels and Rubberized Tracks
Medical Self-Help
Fall-Out Shelter Management
Work Methods, Work Standards, and Work Simplification
Effective Writing and Speaking

Navy

Value Engineering
Basic Supervisory Development
Conference Leadership
Reading Skills Improvement
Soldering
Method Time Measurement
Defensive Driving
Basic Computer Systems Principles
Work Methods and Standards

Defense Supply Agency

Basic Supervision
Effective Listening
Reading Improvement
Supervisory Development
Refresher Telephone Techniques
Principles of Management
Role of Supervisor in Equal Employment Opportunity
Work Simplification
Effective Writing
Conference Leadership
Completed Staff Work
Incentive Awards
Middle Management Development

Defense Atomic Support Agency

Role of Supervisor
Selection and Utilization of Personnel

D. C. Government

Letter Writing
Civil Defense
Speed Reading
Medical Self-Help

D. C. Unemployment Compensation Board

Letter Writing
Speed Reading

Federal Communications Commission

Shorthand

Supervision and Group Performance

Federal Trade Commission

Stenographic Skills

General Services Administration

Archives and Communications
Utilities Management
Driver Education
Management and Disposal of Personal and Real Property

Telecommunications
Transportation Management
Procurement and Supply Management

Government Printing Office

Editorial Planning for Printing Production

Effective Administration of the Contract for Marginally Punched Continuous Forms

Health Education and Welfare

Basic Analysis
Effective Writing

Radiological Health
Management Analysis

Housing and Urban Development

Shorthand Refresher
Reading Improvement

Secretarial Training

Interior

Supervision and the Administrative Process
Safety
Forestry
Radio Operator's Course
Conference Planners Seminar
Civil Defense
Managerial Grid Training
Job Corps Work Leaders Fire Crew Training
Air Attack Fire Boss Training

Operational Problems in Personnel Management
Fire Prevention and Suppression
Conference Leadership
Office Practices Course
First Aid
Allotment Management Workshops
National Interdepartmental Fire Generalship School
Fire Management Training
Defensive Driving

Interior (con't)

- Stabilization and Preservation of Adobe Buildings
- Duck Wing Analysis Training
- Management for Supervisors
- Biology
- Ecology
- Geology
- Microbiology
- Shorthand
- Supervisory Training
- Animal Damage and Recognition Control
- Search and Rescue
- Law Enforcement
- Concrete Control and Earth Control and Investigations
- Bacteriology
- Engineering
- Chemistry
- Hydrology
- Water Pollution Control

Interstate Commerce Commission

- Shorthand

Justice

- Fingerprinting
- Immigration Inspection Training
- Sociology
- Orientation to Correction Work
- Supervision and Group Performance
- Police Schools (Basic or Recruit)
- Counseling in Corrections
- Safety for Federal Supervisors
- How to Use Teaching Machines
- Report Writing

Library of Congress

- Orientation for Federal Librarians

National Aeronautics and Space Administration

- Technical
- Secretarial
- Managerial
- Supervisory

Panama Canal Company

- Language
- Clerical
- Supervisory and Management
- Professional and Scientific
- Technical
- Craft
- Safety

Post Office

- Driver Training
- Job Instructor Training
- Supervisory Development
- Maintenance Management
- Safety

Railroad Retirement Board

- Management Development

Small Business Administration

- Management Development
- Instructor Training

Smithsonian Institution

- Security Guard Training

State (Foreign Service Institute)

- Orientation
- National Interdepartmental Seminar on Problems of Development and Internal Defense
- Junior Officer Training
- Communications Skills
- Area Studies
- Senior Seminar in Foreign Policy
- Administrative Training
- Consular Training
- Economic and Commercial Training
- Political Training
- Executive Development
- Clerical Training
- Language Studies

Transportation Department

- Urban Travel Forecasting
- National Aircraft Accident Investigation School Courses
- FAA Academy Courses

Treasury Department

- Dignitary Protection
- Specialized Criminal Investigation
- Supervisory Training
- Gregg Shorthand Theory Review
- Questioned Documents
- Multiple Agency Inspection for Customs
- Spanish
- Retirement Counseling
- Shorthand Refresher Dictation
- Typewriting Refresher

United States Civil Service Commission

- ADP Management
  - ADP User Education
  - ADP Auditor Training
  - Computer Specialist Training
  - Management Science Education
- Personnel Management
  - Personnel Management Systems
  - Social Science Concepts and Applications
  - Skills, Techniques and Procedures
  - Personnel Management for Supervisors and Managers
  - Federal Personnel Intern Program
- Communications and Office Skills
  - Communications
  - Office Skills
  - Service to the Public
- Financial Management-PPBS
  - Survey Courses
  - Fundamental Concepts and Techniques
  - Advanced Techniques
  - Conferences
  - Special Applications
- General Management
  - Entry Level Courses
  - Supervisory Training
  - Managerial Training
  - Executive Training
  - Substantive Training
  - Legal and Legislative Training

Veterans Administration

- Medical and Scientific Training
- Work Simplification
- Human Relations
- Benefit Program
- Medical Self-Help
- Perpetual Inventory
- Goal Setting
- Cost Control
- Group Performance
- Essentials of Supervision
- Personnel Technical and Management Training
- How to Instruct
- Civil Defense
- Safety and Fire Protection
- Pre-retirement Counselling
- Employee-Management Cooperation
- Automatic Data Processing
- Two-Way Communication
- EEO and NYO Program Training

APPENDIX B

ADDITIONAL INTERAGENCY TRAINING PLANNED FOR FY 69

Agriculture

Big Game Range Analysis

Atomic Energy Commission

Nuclear Materials Safeguards

Commerce

Supervisory Training

Environmental Research

Defense

Air Force

PPBS
ADP Orientation
Civilian Personnel Policies and Techniques

Orientation for Retirement Planning
Interviewing and Counseling
Advanced Management

Army

Equal Employment Opportunities
Human Relations

Federal Women's Program
Local Labor Management Relations

Navy

ADP
Labor Management Relations
Advanced Computer Technology

PPBS
Financial Management

Defense Atomic Support Agency

Effective Communications

General Services Administration

Procurement

Transportation

Health, Education and Welfare

Interspace Medicine
Tropical Disease
Medical Records Management
Opthalmology Technician Training

Interior

Land Classification
Environmental Conservation Education
Biometrics
Fire Simulation
Right of Way Negotiations

Justice

Narcotics Addicts Rehabilitation Act Program
Immigration Law and Procedures

Peace Corps

Apprentice Trades

Post Office

Conference Leadership
Techniques of Travel Voucher Preparations
Personnel Transaction Training
Equal Employment Opportunities

Smithsonian Institution

Exhibits Design and Construction
Museum Technology

Treasury

Programmed Instruction for New Bank Examiners
One Stop Inspection (Customs)

United States Civil Service Commission

Federal Executive Institute

Veterans Administration

Nursing
Medical and Surgical Procedures
Use of Audio-Tape in Training Courses
Radiological Monitoring
Shelter Management

APPENDIX C

LONG-TERM NON-GOVERNMENT TRAINING FACILITIES

Colleges and Universities

University of Alabama
American University
University of Arizona
Boston University
University of California
- Berkeley
- Davis
- Irvine
- Los Angeles
- Richmond
- Riverside
- San Diego
- Santa Barbara

Catholic University of America
University of Colorado
Colorado School of Mines
Colorado State University
Cornell University
University of Delaware
University of Florida
Florida State University
George Washington University
University of Georgia
Georgia Institute of Technology
Harvard University
Howard University
University of Illinois
University of Indiana
University of Iowa
Johns Hopkins University
University of Maryland
Massachusetts Institute of Technology
University of Michigan
Michigan State University
North Carolina State University
Ohio State University
Oregon State University
Pennsylvania State University
Princeton University
Purdue University
University of Rhode Island
University of South Carolina
Stanford University
Syracuse University
University of Texas
Texas A & M University
Utah Technology College
University of Virginia
Virginia Polytechnic Institute
University of Washington
Washington University
Weber State College

Other Facilities

Brown Institute
Athens Area Vocational-Technical School
Union Carbide Corporation--Oak Ridge National Laboratory
Washington Data Processing Center
Bendix Corporation
California Department of Public Health
Budd Company
Control Data Institute
Temple School
Vocational Technical Education Center
The Brookings Institution
Institute of Environmental Health, Kettering Laboratory
MEDCOMP Research Corporation

Foreign Institutions

University of Aberdeen (Scotland)
National Institute of Animal Industry, Department of Forage Crops, Chiba-Shi (Japan)
Swiss Federal Institute of Technology (Switzerland)
University of Cambridge (England)
Division of Forest Products, Commonwealth Scientific and Industrial Research Organization (Australia)
Bundesanstalt Für Fleischforschung (W. Germany)
National Research Council, Prairie Regional Laboratory (Canada)
University of Bologna (Italy)
Centre d'Etudes Nucleaires Faculte des Sciences (France)
University of Freidburg (W. Germany)
Geofysisk Institute, Universitetet I Bergen (Norway)
Imperial College (England)
Ministry of Technology Explosives Research and Development Establishment, Waltham Abbey (England)
University of Reading (England)
University of Gottingen (W. Germany)
University of the Netherlands
University of Bristol (England)
Molecular Thermodynamics National Physical Laboratory, Teddington, Middlesex (England)
Bar-Ilan University, Tel-Aviv (Israel)
Oxford University (England)
University of Birmingham (England)
Universita di Torino (Italy)
University of London (England)
VonKarman Institute for Fluid Dynamics (Belgium)
University of Sheffield (England)
British Iron and Steel Research Association (England)
Atominstitut der Ostereichen Hochschule (Austria)
University of Newcastle-upon-Tyne (England)
Netherlands Universities Foundation for International Co-operation
Institut Voor Kernphysich Ouderzock (Netherlands)
University of St. Andrews (England)

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